



## Substance Abuse Prevention & Early Intervention

### *Wyoming Vision 2020*

*The Wyoming Legislature hereby instructs and authorizes the Department of Health, acting in concert with the Youth Development Sub-Cabinet, to undertake a comprehensive, integrated program to prevent, or intervene with, substance abuse and related problems in young people from prenatal through young adulthood. The Department of Health shall:*

- 1. Promulgate standards for prevention and intervention of multi-problem behavior;*
- 2. Collect and analyze data on prevalence and predictors of substance use and related multi-problems each year on Wyoming minors and adults for the purposes of guiding policy, procedures, and programs;*
- 3. Use Wyoming specific data to design and alter the prevention program;*
- 4. Select, adapt, rapidly deploy, and revise scientifically proven practices that have promise or proven utility for a cost-effective prevention results, which have been recommended in the report for House Bill 83 passed by the Wyoming Legislature in 2001, or that may discovered hereafter;*
- 5. Seek out, develop, and test prevention or intervention strategies that address Wyoming specific problems, when published science offers only partial guidance for prevention or intervention strategies;*
- 6. Develop a public-private partnership under the trademark wyowins.net™ for the purposes of leveraging people, logistical or financial resources for prevention and early intervention;*
- 7. Incorporate the guidelines from the Tobacco Use Blueprint, regulating the funds from the Tobacco Settlement, into these efforts, as previously adopted into law by the Wyoming Legislature;*
- 8. Seek the advice of the Governor's Advisory Board on Substance Abuse several times a year on the implementation of this Act;*
- 9. Promulgate rules and regulations that may be necessary for the intent of this act to be fulfilled;*
- 10. Report not less than annually to the Legislature on the progress of preventing substance abuse and related problems, with suggestions for Legislative Action that may be required to further the objectives of the Wyoming Vision 2020 Act of having Wyoming lead the country in indicators of well-being for its young people and reduced risk indicators for its young people on or before the year 2020.*

## Could the Future Be Different?

The young people sat down, looking a bit nervous, a trifle uncertain about what might happen next. They began to tell their stories, taking turns. Their tales explain what might be done in Wyoming to create a different future.<sup>f</sup> A young, blonde woman spoke first:

*We moved many times, mostly because we didn't have any money. My dad wasn't really in the picture for much of much of my life. My mom had different boyfriends, and they always fought. The boyfriends even hit us, while they were doing heavy drugs. A cop lived next door to us for a while. He never stopped the craziness, and we kept hoping he would. One time, like when I was in first or second grade, I took some of my Mom's coke to school... I never really thought the world could be any different. I thought the world was filled with drugs, hitting, and stupid stuff...*

After the audience heard all the details, almost every adult in the room wondered, "Why didn't somebody do something early in that kid's life?" It was a good question. The next young woman spoke, with obvious keen intelligence.

*After I got raped, I learned that I could use drugs to make me feel anything I wanted. I could take this drug to feel happy. I could take something else to slow down. I*

*figured I could use any drug to make me feel or think anything I wanted. I was so good with using the drugs I even did better in school. Nobody seemed to notice even when I came to school high and with my arms marked with needle- tracks from shooting up. I was in all the sports and clubs and stuff...*

The young woman had such insight into her experiences, and the adults again left wondering, "How could we have not noticed until she was in so much trouble?"

A really high-energy kid spoke next. He got up, used a flip chart to illustrate his points. He entertained the people at the hearing, talking about having used drugs as a bright teenager.

As soon as he finished, he left the meeting. During the break that ensued, most of the adults thought the young man sought thrills from the drugs and attention—just like he had done at the meeting. Said one person insightfully; "I think you'd have to keep him really busy to stay away from drugs."

The next young man to speak described a history of aggressive behavior and school failure, which seemed to start when the boy started public school. He started to hang out with other kids who egged each other on to do more and more crazy things, which included a whole laundry list of crimes. Troubles with the law and authority marked his whole history.

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<sup>f</sup> These stories are summaries of testimony heard in Cheyenne, WY, on June 14-15, 2001. The stories are abbreviated.

## Prevention and Intervention

Later after the young people finished their testimony, various professionals who worked with younger children and families began to tell their stories. A provider working with mothers with substance abuse problems in a residential setting spoke:

*We had a group of seventeen 2-3 year-old children with our moms. These children are so aggressive that our day care provider told us to find another facility. This is the first time such a thing has happened.*

Subsequently, a high-level supervisor in the state government for child mental health services spoke up:

*Approximately 1-2 serious cases of children needing expensive services are coming to the state office a day in Wyoming. These are children whose parents, most particularly moms, are also in the system for multiple problems. Many of the moms have been sexually abused. Some of the children have such serious impairments that we are sending them to residential treatment out of state for months or years at a time. These children often come with significant impairments, and we have little in place to address their needs in the state. They won't go away, though. They often start using drugs when they are teens, and later get sent to Lusk or Rawlins as adult criminals.*

The situations in Wyoming are not just about families from extreme poverty or adversity. During the preparation of this report, we accumulated stories of families

from all walks of life who have been savaged by preventable substance abuse.

### *A different possibility*

Ask anyone at the corner coffee shop, “Why do people do drugs, and what can be done to prevent it in kids?” Almost everyone will have a ready answer. Folks might say things like:

⇒ “Just stupidity. The kids don’t know how harmful drugs are.”

⇒ “Bad parents...there ought to be a license to be a parent...”

⇒ “Too much TV and loose Hollywood morals. The kids need to be scared straight...”

⇒ “Low self-esteem; the kids who use drugs don’t feel good about themselves.”

⇒ “Too much permissiveness in the schools and homes...How about bringing corporal punishment back?”

These and other intuitions were among the very first ideas to be tested as possible prevention strategies by scientists. In general, they turned out not to work. In a few cases, some interesting results started to emerge from good scientific studies, just like the kinds of studies that we expect from good medical research to test what works to cure cancer and other terrible diseases.

Almost 40 years have elapsed since scientists and major federal agencies started studying the prevention of substance abuse and related behaviors.

## Prevention and Intervention

Various studies, various methods, and different models now show it is possible to cut the prevalence rates of tobacco, alcohol, and other drugs among young people by as much as one-half. Some prevention methods involve prenatal or early childhood interventions. Some prevention methods involve improving the early behaviors of parents and children that predict substance abuse. Some strategies involve altering how the community interacts with kids, families, and people who need help. Some strategies involve making common drugs like alcohol and tobacco less accessible to children and youth. Some powerful strategies are saved for when children, young people, or adults show signs of being in trouble but are not necessarily abusing drugs. Wyoming can be the first state to apply the most powerful findings to make the state number one in the country in prevention of substance abuse and related problems.

### ***Wyoming Specific Data for Prevention Planning***

Beginning in the 1997-1998 and the 1998-1999 school years, Wyoming began extensive data collection on substance use among its teenagers enrolled in schools, providing a general description of drug, alcohol, and tobacco patterns in the state using the American Drug and Alcohol Survey (ADAS). Unlike other surveys used in Wyoming since 1991, on risky behaviors such as the Youth Risk Behavior Survey (YRBS), the ADAS

sampled most of the students in Wyoming.<sup>g</sup>

The present report involved an analysis of the combined ADAS data over two years (about 25,000 surveys before data reduction), and the analyses were designed to create a model for prevention in Wyoming based on Wyoming youth data. Such an analysis had not been conducted previously, and was prepared by the newly created Statistics Center and the University of Wyoming. Dr. Kami London prepared the analyses with support from Dr. Narina Nunez. The complete information on the results will be published as an appendix to the overall House Bill 83 report. The size of the data set is extremely large in terms of the population of Wyoming, which boosts our confidence in the results. The analyses provide a foundation for action to prevent substance abuse, specific to the needs and conditions of Wyoming. This document summarizes some key results.

### **Wyoming Specific Analyses**

The authors of the report argue that it is important for Wyoming to have its own data-driven analyses of the predictors of substance use, misuse, and abuse. With a Wyoming-specific model, it is more likely that the State will devise, implement, and promote more cost-effective strategies for prevention and intervention. With a Wyoming-specific model, policy makers and stakeholders can choose research-based practices with greater probability of

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<sup>g</sup> Extensive reports on the ADAS and YRBS have been previously published by the Wyoming Department of Health and the Wyoming Department of Education.

success, instead of just going down a menu of so-called “best practices.”

### **Wyoming Recommendation:**

**It is recommended that the State** commission analyses of data sets to create a Wyoming- specific model of substance abuse, misuse, and use.

### **Substance Use, Misuse, and Abuse Among Wyoming Youth**

A major positive result emerges in the substance abuse data on Wyoming youth, which is displayed in a figure below. About 50% of all Wyoming youth enrolled in school have had no or negligible involvement<sup>h</sup> with any drug—not tobacco, not alcohol, not marijuana, not meth.

A majority of young people does not use, and this item can be publicized to help correct the common view by young people that “everybody does it.” In Wyoming, everyone does not do it. The bad news is about 25% of the youth enrolled in secondary schools in Wyoming have a moderate to serious problem in the use of various drugs.<sup>i</sup>

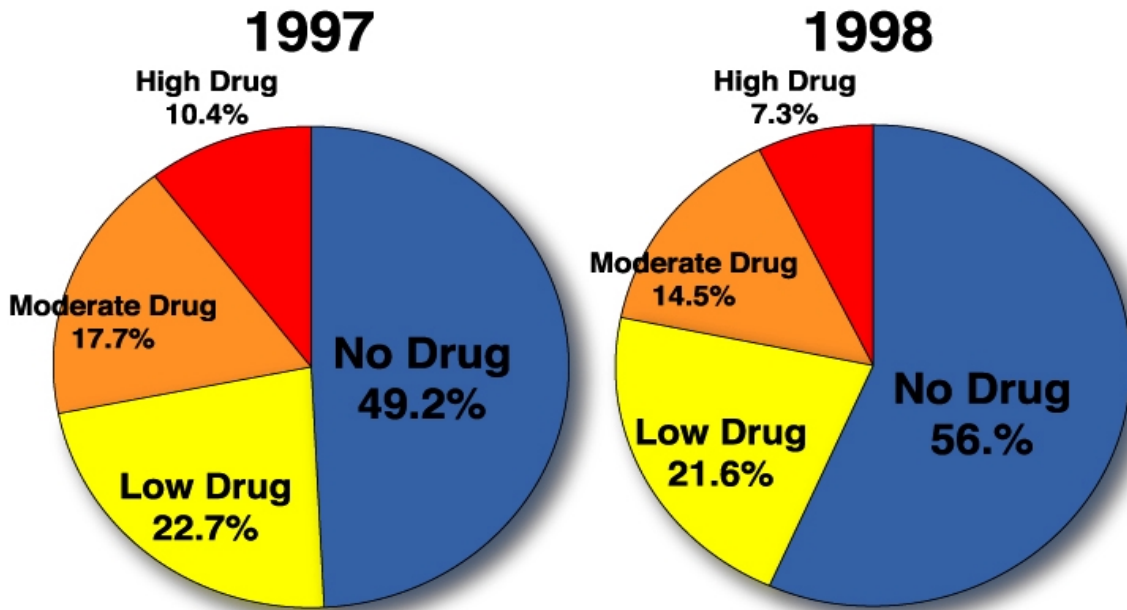
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<sup>h</sup> Negligible use means simply trying a drug but not continuing with use.

<sup>i</sup> The analyses excluded some 1,748 children from the database, because of a variety of faking responses, inconsistent responses or other errors.

## Prevention and Intervention

Figure 13: Substance Use Among Wyoming Secondary Students



Source: American Drug and Alcohol Survey of 22,122 Students in the 6th, 8th, 10th and 12th Grades in Wyoming, analyzed by Statistics Center, University of Wyoming

The data seriously underestimated the actual misuse of drugs among our young people, because the surveys do not sample youth who are not enrolled in school or enrolled in alternative education programs—both circumstances are known to have much higher rates of misuse and use of drugs, alcohol, and tobacco. How many teenagers have a serious problem with substance abuse in Wyoming? It would be safe to say that at least 2,000 young people in Wyoming have a potentially serious problem with substance use. The number may be twice that high in reality, but no one knows for sure.

Are there differences in prevalence rates among Wyoming counties? Indeed there are. In Lincoln County, 75% of the young people have negligible drug use, while Converse County has only 42% of its young people who have not used drugs. Natrona County has the highest percentage of young people with multi-drug use—5.8%. The county with the lowest percentage of hard-core multi-drug using youth is Sublette County at 0.6%. A separate report will detail patterns of

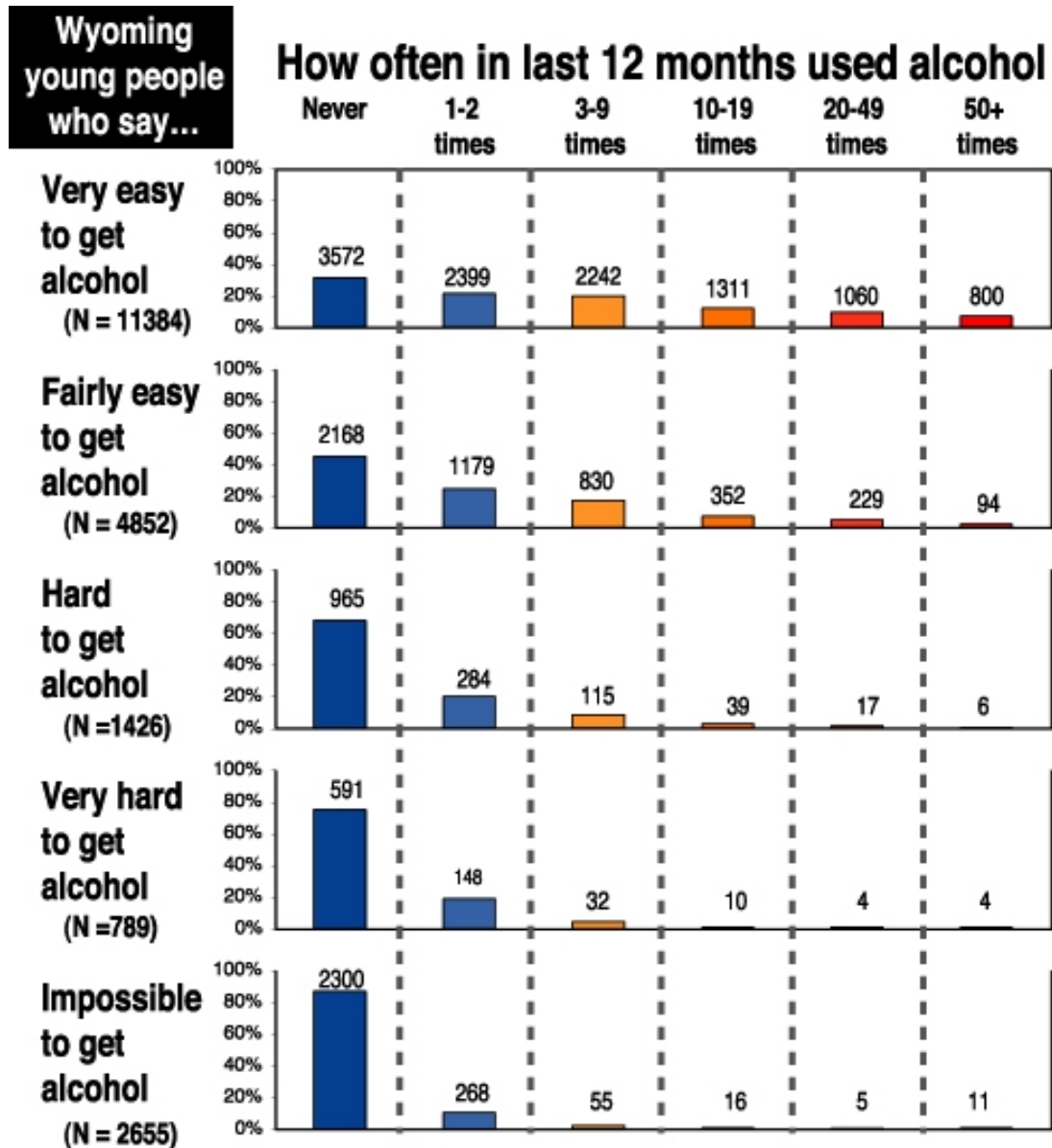
substance use, misuse, and abuse by each Wyoming county. Pronounced differences among the various communities in Wyoming are consistent with research in the Rocky Mountain area, showing lifetime prevalence and the frequency of occurrence of different types of drug users—indicating that rural communities are likely to develop idiosyncratic patterns of drug use.<sup>12</sup>

## Wyoming Predictors of Serious Use

What predicts substance abuse among Wyoming young people, and can those predictors be altered? The next paragraphs describe some analyses yielding potent predictors specific to

Wyoming.

Perceived Availability. One pattern quickly emerged predicts use, misuse, and abuse of various drugs—perceived availability by youth. The Figure below shows the relationship between perceived availability of alcohol and serious use of alcohol by our young people. The



difference in the figure are statistically significant.”

**Figure 14: Perceived Availability and Alcohol Use, Misuse, & Abuse**

Source: American Drug and Alcohol Survey of 21,106 Students in the 6th, 8th, 10th and 12th Grades in Wyoming, analyzed by Statistics Center, University of Wyoming, using data from 1997 and 1998



## Prevention and Intervention

By knowing young people's views on availability of alcohol, we can reduce statistical error in predicting alcohol use in the past year by 52.4%. As the difficulty of getting alcohol increases, the number of times the child has drunk in the past year decreases. This is a powerful effect. An even more powerful effect is found between children's rating of the availability of marijuana and the number of times that the child has smoked it in the past year. As the difficulty in attaining marijuana increases, the number of times smoking it in the past year decreases. By knowing how difficult the child views getting marijuana, we can account for 72.7% of the variance in how many times they have smoked marijuana. In sum, the children's perception of the availability of

effect on the number of times they have partaken in the controlled substances in the past year. Fortunately, there are community-based strategies for reducing the availability of tobacco, alcohol, and other substances, which will be discussed.

Is perceived accessibility of tobacco a factor? Yes, according to the analyses. Perceived tobacco accessibility is an issue that may not be conscious to adults. In Wyoming it is illegal to have tobacco products where children and youth could have easy access to them. Recent snapshots of Wyoming supermarkets across the state show that a child or youth could easily steal tobacco, because of the fact that the displays are open to all as show below.

**Figure 15: Various Pictures of Tobacco Accessibility to Kids and Near Kids Toys in Wyoming Stores**



marijuana and alcohol exerts a strong



## Prevention and Intervention

These displays may not seem important to the causal adult eye, and may even be completely unintentional by store clerks and managers. Both national and Wyoming data show that children steal tobacco frequently. This fact may not seem particularly important until one understands some of the psychopharmacology of tobacco smoke, which was not widely known until after the discovery phase of the Attorney General's lawsuit against tobacco companies. For some time, the tobacco companies have known that tobacco affects a basic part of the brain that remembers how one got reinforced. The nicotine in tobacco directly stimulates the reward circuits in the brain, and since children often steal tobacco at home or stores to get it, the drug action creates a pleasant memory associated with *stealing*. This is not something that any sensible adult would wish to teach, and accounts, in part, for how tobacco might be a stronger gateway to illegal drugs and illegal behavior.

### Wyoming Recommendation:

A major part of a Wyoming-specific prevention effort must focus on reducing both perceived and actual access to tobacco and alcohol by kids. This will likely involve expansion of such techniques as "reward and reminder" and publicity, with some associated enforcement. Some changes in legislation or policies will be necessary for this to happen: 1) Use of minors to attempt purchase of alcohol, as was done for tobacco in 2000; and 2) rules published for display of tobacco products near children's products.

### Factor Analyses of Wyoming Data

Typically, hundreds of variables can predict substance abuse. Each one might have a little predictive power or a lot. Statisticians have devised a way to cluster the predictive factors, for greater power or meaning. One such technique is a factor analysis. In the Wyoming context, the Statistics Center identified 10 possible factors, which are discussed in greater detail in an appendix. The ten factors are:

- ⇒ Antisocial/aggressive behavior
- ⇒ Depression/negative self-worth
- ⇒ Positive views towards school
- ⇒ How much family cares if student does drugs

## Prevention and Intervention

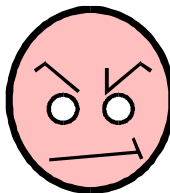
- ⇒ Friendship relationships/concern for friends/views towards morality
- ⇒ Happiness/positive self-esteem
- ⇒ Family talked with student about doing drugs, alcohol, tobacco
- ⇒ Parents care and monitor child's actions
- ⇒ Have close friendships/likable person
- ⇒ Perception of trouble for different violations

Which of these factors are most relevant to Wyoming? That answer lies in something called a regression, which arranges the factors in an order of which predicts the most substance abuse in order of “power.”<sup>j</sup> There were two potent predictors:

- ⇒ Protective Friends. How much a young person attempts to stop friends from using tobacco, alcohol, and other drugs is a protective factor.



- ⇒ Antisocial/Aggressive Behavior. How much antisocial behavior the young person does (hitting, fighting, stealing, risk taking,



cheating, etc.) is a risk factor.

How powerful are these predictors? **Very.** “Protecting Friends” accounts for 17.5% of the variance in risk for substance abuse. By adding the factor of “Anti-Social/Aggressive Behavior” (the variable that is the second most powerful predictor of risk), the percentage of variance accounted for increases by .127. This indicates that “Protecting Friends” and “Anti-Social/Aggressive Behavior” together account for 30.2% of the variance of risk for substance abuse. The third most important factor for Wyoming youth was how much a young person’s family cares about drug use. It added another 6% explained variance. Hence, the three variables together account for 36.1% of the prediction of substance abuse in Wyoming.

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<sup>j</sup> The Statistics Center at the University of Wyoming conducted a step-wise multiple regression with risk factors serving as the predictor variables and drug involvement/risk categories (i.e., Risk Level Category) as the response variable. This is a classic research strategy.

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### **Wyoming Recommendation:**

From a statewide policy perspective, primary focus on a Wyoming specific prevention and early intervention plan for substance abuse and related problems ought to focus on: 1) reducing perceived availability to alcohol, tobacco, and other drugs by minors, 2) reducing early antisocial behaviors, and 3) increasing peer networks that support non-use of substances. This recommendation is consistent with national research.

Additional research needs to be undertaken to understand why some counties have lower prevalence rates of use, misuse, and abuse using multiple methods of measurement.

⇒ Wyoming youth use methamphetamine at a rate 3-5 times higher than the rest of our country.

### **Cross Validation of Substance Use, Misuse and Abuse in Wyoming**

The following data documents the extent of youth problem behavior in Wyoming: Wyoming Department of Health and the Center for Substance Abuse and Treatment Youth-Indicators of Substance Abuse 1987-97 (Ellis & Glover, 1998):

⇒ Since the 1990's, Wyoming young people have had nearly twice the rates of alcohol, tobacco, and other drug problems when compared to the rest of the country.

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- ⇒ Over 40% of students in grades 10-12 met DSM-IV definition of ATOD abuse. 33% of Wyoming students in grades 10-12 have used illegal drugs.
- ⇒ There was a 19% increase in alcohol-involved hospital discharges and a 42% increase in drug-involved discharges from 1997-1998.
- ⇒ Alcohol-related arrests in Wyoming were 90% above the national average.
- ⇒ Juvenile arrests (under 17 at the time of arrest) rose 48% for the most serious violent and property offenses while the nation saw a 12% decrease in this area.
- ⇒ Total juvenile arrests in Wyoming were 57% above the national level

Our Wyoming youth alcohol, tobacco, and other drug uses are dramatic, characterized by rates of use that consistently exceed national trends and averages.

Wyoming has a substantial subset of young people who represent what is called “multi-problem” youth. Intervention strategies need to be tested in the Wyoming context to reach such children and youth, since they represent a major loss.

Our state needs to consider several actions to reduce the percentage of young people who drive and drink. This could include:

- 1) restrictions on drive-up windows for alcohol,
- 2) graduated licenses, and other interventions.

### National Youth Risk Behavior Survey

Since 1991, the state of Wyoming has participated in the Youth Risk Behavior Survey sponsored by the US Centers for Disease Control and Prevention. The most recent published data on Wyoming were released for student data for 1999. Highlights of the 1999 data are reported below in a table showing the rank of Wyoming against the whole country.<sup>k</sup>

How does Wyoming compare to some of the United States big cities? Here are a few sample comparisons from the YRBS over time. What it shows is that Wyoming’s young people have some substance abuse habits that exceed those of young people in Los Angeles, Boston, New York, Miami, Chicago, or nationally.

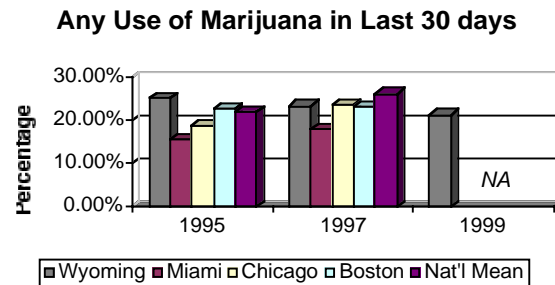
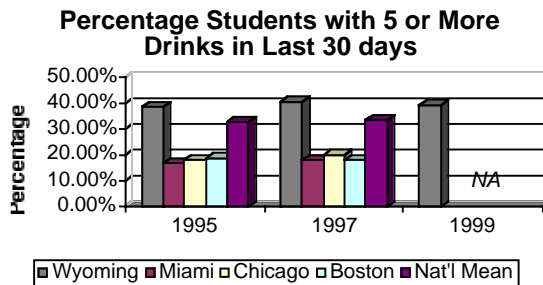
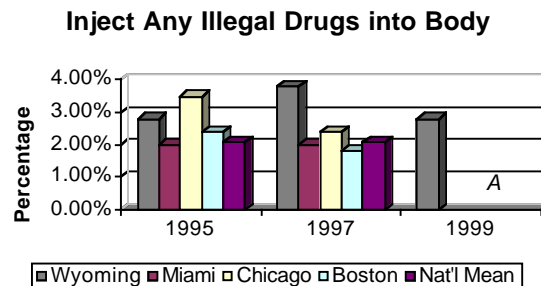
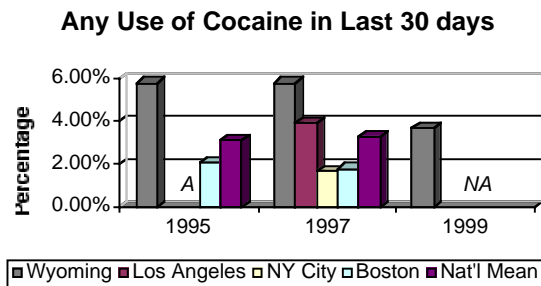
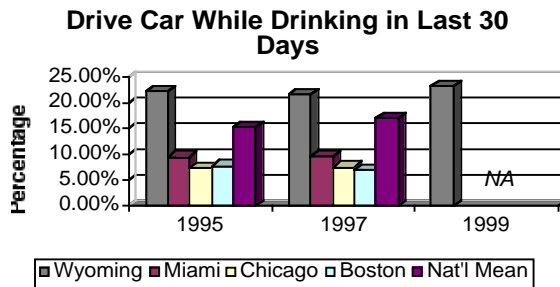
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<sup>k</sup> The YRBS samples students in various states. It is not a universal sample of all students.

## Prevention and Intervention

Figure 16: Centers for Disease Control and Prevention's Youth Risk Behavior Survey

Prevalence of Behavior Among Secondary Students	WY Current %	U.S. Current %	National Ranking
Current smokeless tobacco use	18.0	8.0	2 <sup>nd</sup>
Teen alcohol use	55.0	50.0	5 <sup>th</sup>
Drinking alcohol and driving	23.0	13.0	3 <sup>rd</sup>
Rode with a driver who had been drinking alcohol	39.0	33.0	5 <sup>th</sup>
Motor vehicle crash deaths, ages 1-14	10.3	4.2	n/a
Binge drinking	40.0	32.0	4 <sup>th</sup>
Teen suicide, ages 15-19	15.9	9.4	n/a
Ever abused toxic inhalants	18.0	15.0	4 <sup>th</sup>
Ever used methamphetamine	13.0	9.0	5 <sup>th</sup>
Used alcohol or drugs at last sexual intercourse	31.0	25.0	3 <sup>rd</sup> (tie)
Tobacco use in pregnancy	22.5	13.2	n/a
Alcohol use in pregnancy	1.9	1.2	n/a
Note: A national rank of #1 means that a state would have the highest rate, but a rank of #50 would be the lowest rank. All rates or ranks are adjusted for per capita population.			



## Prevention and Intervention

### Wyoming Recommendation

Smokeless tobacco needs to be a prevention focus, because a very coarse analysis suggests that its use by young people (especially at school) is a predictor of methamphetamine use and very adverse health effects.

### Wyoming Recommendation:

The Youth Risk Behavior data suggest Wyoming has a rather high number of youth who engage in “multi-problem” behavior, and they need to be a high-priority population focus in intervention planning, since such youth often use multiple drugs.

### Wyoming Recommendation:

The Youth Risk Behavior Survey in 2001 was done for the first time as a census survey (all schools) in Wyoming. Previously, all data were samples. It is imperative that the Department of Health and the Department of Education undertake a multi-variant analyses of the 2001 data, similar to the analyses completed for this report as conducted on the American Drug and Alcohol Survey, also a census survey.

### National Household Survey

The National Household Survey on Drug Abuse is an annual survey conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA). This survey has been the primary source of estimates of the prevalence and incidence of illicit drug, alcohol, and tobacco use in the population since 1971. The survey is based on a nationally representative sample of the civilian, non-institutionalized population of the United States age 12 years and older. Typically, reports from the National Household Survey (which are done on the telephone are lower than anonymous written surveys). Snapshots of 1999 data for Wyoming from the survey show that:

⇒ Wyoming children ages 12-17 are among the highest in the nation for past month use of any illicit drug other than marijuana; past month binge alcohol use; past year dependence on

illicit drugs or alcohol, and past month use of cigarettes.

⇒ 5.6 percent of adolescent non-smokers reported past month use of an illicit drug.

⇒ 41.4 percent of teen smokers reported past month illicit drug use.

⇒ 19.2 percent of children living primarily in rural counties reported using cigarettes in the past month, compared to 13.3 percent of children living in metropolitan areas.

### Annie E. Casey Foundation KIDS COUNT Data Book

Most states participate in the Kids Count project, and Wyoming is one of those states. The 1999 report finds:

⇒ The child death rate is more than 20% worse than the 50-states median with 36 deaths per 100,000 children ages 1-14.

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- ⇒ Rate of teen deaths (15-19) by accident, homicide, and suicide is more than 20% worse than the 50-states median, a rate double the rest of the nation. While the rest of the nation showed to have decreased their rates, Wyoming was 10% worse than in 1985.
- ⇒ Juvenile property crime arrest rates were higher than the rest of the nation.

Various studies suggest that Wyoming young people could change all of the variables or factors to prevent substance abuse and misuse.

### Wyoming Recommendation:

We recommend caution in promoting the data on high rates of use in Wyoming by “multi-problem” youth. Over emphasis on these data in public relations may mistakenly increase the perception that substance abuse is the norm among Wyoming youth.

## Case File Stories

From time-to-time during this study, we had the chance to examine case files from various departments on children and youth or adults with serious problems. The case files depicted early and costly histories. For example one youth, “Billy,” alone had the following costs in the table below:

**Table 2: Cost of "Billy" during adolescence**

Boys Home expenses (one time)	\$50,000
Medicaid (during teen years)	\$110,000
Special Education (child's lifetime)	\$28,000
State Hospital (9-month stay)	\$128,000
Legal (estimated)	\$20,000
<b>Total</b>	<b>\$336,000</b>

Is Billy unique? No. The Mental Health Division of the Department of Health has provided some samples of other serious cases for children with high Medicaid expenses since 1995 for serious multi-problems related to ultimate substance abuse (caused by prenatal exposure or predicting abuse or both):



## Prevention and Intervention

- 1) **14 year-old male.** In DFS custody. Currently in an out-of-state (Texas) neuropsych placement. He has received a full diagnostic work up and has been working on the treatment plan since his admit to his current program on 3/7/00. He is at his best right now and ready for discharge to a facility closer to home. However, optimal functioning for this young man is such that no facility within our region will take him. The state hospital has refused him unless special dedicated staff can be found. He will need 24-hour supervision in a safe, structured, predictable, and consistent setting. Total of Medicaid dollars since July, 1995 is: \$244,809.49
- 2) **17 year-old male.** Currently discharged to home against professional advice from a neuropsych facility in Texas. Was previously in the Wyoming State Hospital for a long period of time. He has been in numerous residential treatment centers and has been jailed for threats and assaults. Has been in DFS custody for years. May have been remanded back to parents at this time. Diagnostic work-ups at the neuropsych facility revealed the following. Total of Medicaid dollars since July, 1995 is: \$85,035.04\* Note: This amount does not included the extended placements at the state hospital, DFS covered RTC placements, and detention/correctional placements, where this young man spent most of his life.
- 3) **12 year-old female.** In DFS custody. Currently in a neuropsych placement. Progress is slow and uneven. Will most likely discharge to a BOCES placement in Wyoming. Younger sibling just removed from Mother and is in a BOCES placement now. Behaviors put this young lady at high risk for victimization. She has little ability to interact appropriately with others and is agitated without much provocation. She can be very aggressive and displays little regard for others feelings or property. While her behaviors continue to improve bit-by-bit this young lady still continues to act out with oppositional, disruptive, agitate, impulsive, and sexually acting out behaviors. Total Medicaid cost since July, 1995 is \$351,550.07

Typically, the costs and records are highly scattered. Department of Family Services typically notes more content when a child is an adolescent, and the Department of Health may show more information in Medicaid files for younger children. It is typically the case that powerful interventions do not happen until the child breaches the juvenile justice system, though the inferences from the schools is that there was a documented problem of early aggression in the primary grades for the most serious cases—when interventions deployed were weak and not science-based.

Records for children and youth not under state supervision were not available during the course of the study. However, during the course of the study, individual families told of their own experiences. It was not uncommon for families to report that: 1) they could not get appropriate early intervention; 2) they may have spent \$50,000 to \$70,000 out-of-pocket for services **out-of-state**; and 3) the exhaustion of personal resources led to involvement with the state system—typically through criminal activities on the part of the youth.

Are small numbers potentially significant in our state? Just 10 fewer cases per year entering the system like “Billy” could avert about \$3,000,000 per year in annualized costs. How many children are there like “Billy”? Nobody really knows, and we need to find out and conduct some “forensic” examinations of their scattered records (e.g., Medicaid, Department of Family Services, Department of Education, etc.) to begin to

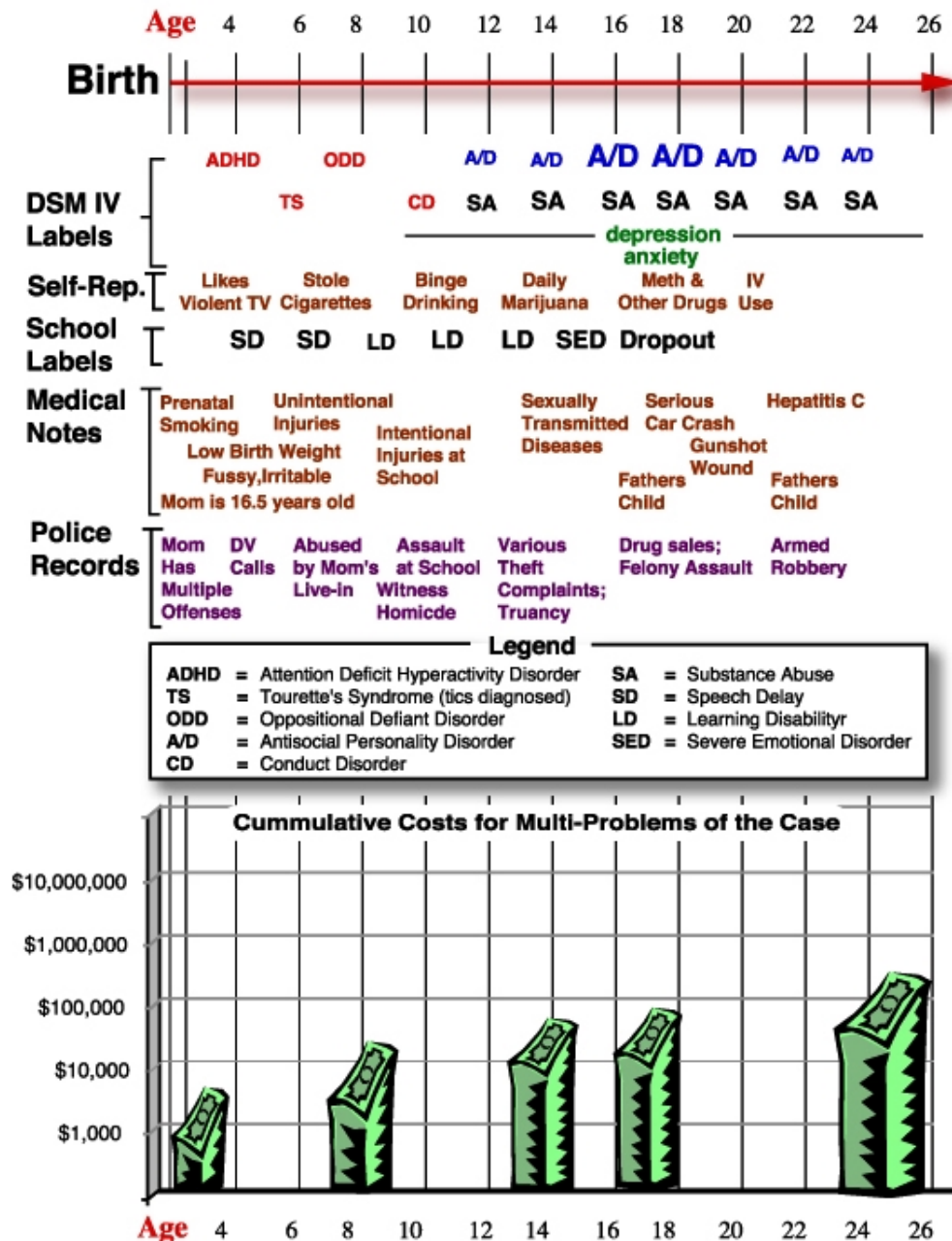
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find out ways that such serious, multi-problem youth might have averted earlier.

What do case files look like graphically for some of these cases? We

present one, which is a composite, showing multiple records and family history in the figures below.

**Figure 17: Multi-Records Case Study Time Line With Economic Impact Estimates**

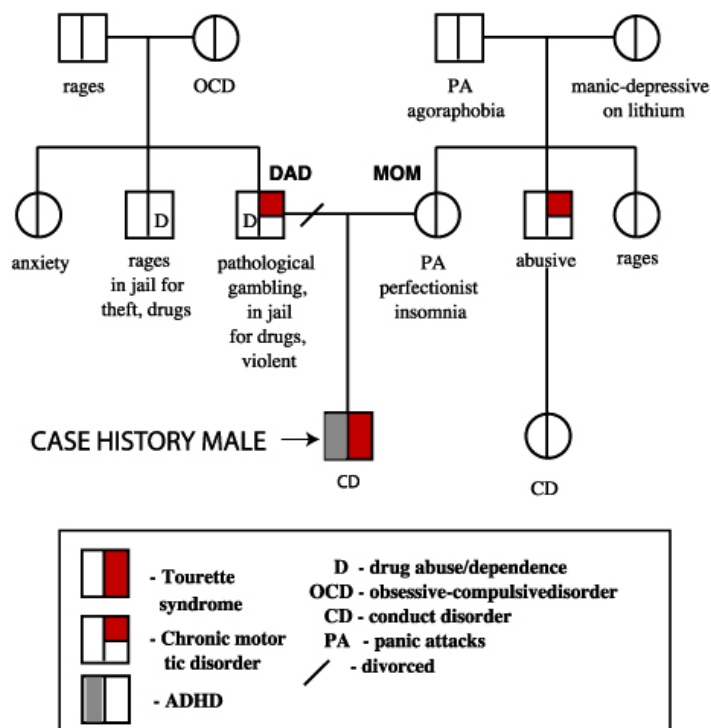


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### Wyoming Recommendation:

Multi-problem youth significantly account for most of the expenses by various state agencies. Wyoming would benefit by an analysis of such youth, and it is recommended that the state agencies undertake a joint review of such children so that more effective interventions could be developed.

Figure 18: Family History of Sample Case



### Other Wyoming Epidemiological Data on Substance Abuse

Wyoming has been aggressively collecting other epidemiological information since about 1996. These data provide a further glimpse for Wyoming specific plan.

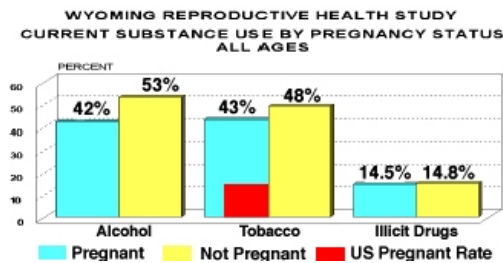
### Pregnant mothers

The issue of pregnant mothers who use substances is an especially salient concern for Wyoming policy makers, since our pregnant mothers have much higher rates of tobacco, alcohol, and other drug use

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than most other jurisdictions.<sup>1</sup> It is clear that the issue of pregnant mothers who are using tobacco, alcohol, and other drugs must be a focus of additional effort in Wyoming. The figure below shows the rate of drug use by pregnant and non-pregnant Wyoming women.

**Figure 19 Current Substance Use by Wyoming Women**



How do the Wyoming rates compare to national rates? The National Cancer Institute reports a national rate among pregnant moms of 13%. About 1 in 10 pregnant moms use tobacco nationally, but more than 4 moms out-of-10 use tobacco in our state.

What is the impact of this smoking rate on medical expenses for Wyoming taxpayers? If one uses national estimates from a study by the National Cancer Institute,<sup>13</sup> they estimate that each pregnant mom who smokes costs an average of \$511 in additional health care costs per pregnancy alone. With approximately 7,000 births in Wyoming, this means about \$1.5 million dollars would be spent on the effects of smoking alone for Wyoming babies. These averages are sometimes deceiving though. First, women seldom misuse one drug during pregnancy. Second, interviews

with local Wyoming health-care providers revealed one case of a mom who smoked and prematurely gave birth to twins. The time in the Denver hospital for those two infants alone cost the state about \$500,000. Another hidden cost for the state is the long-term costs for such exposed children: 1) they are many times more likely to require special education services (which can easily add \$50,000 to \$100,000) directly as a bill against the state treasury; and 2) prenatal exposure to tobacco appears to elevate lifetime prevalence risk of criminal behavior.

The discovery that smoking during pregnancy might stimulate criminal behavior by the child 20 years later is new, and the result of long-term follow up of children—controlling for a number of variables. What is suspected is that tobacco chemistry exposure mimics high stress exposure to the baby's brain. This may turn on certain genes (if a child has those particular genes), which are triggered by early stress exposure. The genes turn on aggressive behavior, by being sensitive to cues that the world might be a bad place for the child. Early aggression predicts lifetime antisocial behavior.

How does that risk translate into policy? Here is one way to look at the possible effect. About 4 additional babies out of 100 will grow up to be involved in the corrections system.<sup>14</sup> That doesn't sound too bad, until you realize that this number results in 140 more criminals from each year of live births (20 years later)—or about 10% of the current corrections population in our state. Those additional 140 kids who become criminals

<sup>1</sup> See multiple recapture study on pregnant mothers published by the Wyoming Department of Health, Substance Abuse Division.

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will add at least \$2.8 million dollars in direct prison costs for Wyoming, not to mention the court costs and human pain of the victims of such “criminals to be.” If we reduce the tobacco use by pregnant moms alone to the national average (13%) in Wyoming (43%), our net savings would save millions of dollars per year in annualized costs. *Wyoming would win big.*

### ***Current Prevention Funding***

A ‘central depository’ or statewide Unified Budget does not currently exist for prevention although information sharing and networking are currently in process.

### **Nominal Substance Abuse Funds**

To identify funding sources around the state, the Substance Abuse Division (SAD) contacted the communities receiving Juvenile Accountability Block Grant funding (JABG), who established Juvenile Crime Enforcement Coalitions, as part of their grant application. Further, state agency heads were asked to identify funding streams that passed through their agency. Additionally, stakeholders were contacted regarding Federal grants at the community level. The following types of funding in the state were identified several months ago. Some of the funds are categorical or related to specific grants, and do not necessarily represent conscious, statewide planning and policy efforts.

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**Figure 20 Types of Substance Abuse Prevention/Intervention Funds in Wyoming**

Funding Source			
<i>Program</i>	<i>Agency</i>	<i>Amount</i>	<i>Activities</i>
Safe and Drug Free Schools	US Dept. of Ed.	\$1,714,346	Funding \$11.36 per student flow-through to school districts
		\$426,587	Governor's portion for high-risk youth/prevention
Juvenile Accountability Block Grant	OJJDP	\$1.4 million	Funding for grantees around the state to develop accountability-based programs to reduce juvenile offenses.
Safe Schools Healthy Students	NIJ, NIH, ED	\$4.5 million over 3 years	Two grantees, Laramie and Arapaho, funded to develop community-based delinquency and substance abuse prevention programs.
Enforcing Underage Drinking Laws	OJJDP	\$360,000	Funding for grantees to develop programs to combat underage drinking.
Drug Courts	NIJ	\$394,000/yr for 2 years	One grantee to fund an adult and juvenile drug court.
WCCA-Non-participating grant	OJJDP	\$1,708,650	Grant to help counties come into compliance with OJJDP requirements
Substance Abuse Centers	SAMHSA Block Grant	\$500,459	20% of Block-grant Substance Abuse Centers for drug prevention
Substance Abuse Centers	State Funds	\$378,773	Substance Abuse Prevention
Methamphetamine Initiative	State	\$100,000	Wyoming 2020 Think Tank, 15,000 Hour Initiative: A Model Demonstration Site, Research consultation for best practices.
UPLIFT	SAMSHA	\$96,123	Strengthening families (n=30) of at-risk children.
Diversion/After Care Program	SAMSHA	\$126,420	Implementing a Hispanic-sensitive model of care.
Wyoming Community Coalition for Health Education	Wyoming Children's Trust Fund Maternal & Child Health	\$20,100 \$35,000	Community awareness on Search Institute Model of asset building.
Wyoming Early Start Program	SAMHSA	\$1,000,000	Early intervention & screening for children ages 4-6 at-risk of emotional disorders, substance abuse, & anti-social behavior, accompanied by training for parents and professionals.
National Tobacco Control Program	USDHHS CDC Funds	\$973,000	Reducing exposure to second hand smoke, prevent initiation among youth, promote quitting, reduce population disparity.
Healthier Communities, Healthier Youth Initiatives	Maternal & Child Health Block Grant	\$100,000	Develop a community infrastructure to encourage local initiatives and partnerships with public health, to include suicide prevention, and adolescent pregnancy



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### Other Prevention and Intervention Resources

To the above funds, there are additional considerations that are or will affect Wyoming prevention and early intervention funding:

- ⇒ The Tobacco Settlement Funds, set-aside in Trust and allocated by formula adopted by the Legislature by incorporation of the Tobacco Use Prevention Blueprint. The Blueprint provides for community education, cessation, services for pregnant women, and school-based prevention. Some of the recommended practices and expenditures in the Tobacco Use Blueprint will affect tobacco and broader substance abuse issues.
- ⇒ Under the Early Periodic Screening, Diagnosis, and Treatment (EPSDT) enacted by Congress, Medicaid funds can reach approximately 30,000 young people in Wyoming with prevention and intervention services, which were not possible until recently. Medicaid (Kid Care Health Care Plan A) and Kid Care B (the state plan) eligible providers can use the Health Check (CPT) codes. These services provide a powerful mechanism for reaching children and their caregivers with targeted, anticipatory guidance and prevention strategies—especially if the most effective practices for such Health Checks were promoted by the multiple agencies. [Licensed providers could be paid for a number of strategies being proposed in this overall plan via these funds: 1) the use

of the Strengths and Difficulties Survey, 2) the Triple P protocols, and 3) certain tools or procedures for use in the child's educational environment.

#### **Wyoming Recommendation:**

The Department of Health should develop a plan each year for maximizing and leveraging the resources of the Tobacco Settlement and Medicaid Resources for effective prevention and early intervention in concert with other funds, consistent with the Tobacco Use Prevention Blueprint and applicable Medicaid regulations or rules.

### Consolidation of Resources

Wyoming, as a whole, might benefit substantially if its grant funds to communities for various prevention and intervention services for substance abuse, juvenile delinquency, school dropouts, and related problems were consolidated and governed by a set of comprehensive, science-driven practices and procedures. Thus, the following funds might be placed into one general prevention fund:

- ⇒ Safe and Drug Free Schools Block Grant
- ⇒ Safe and Drug Free Schools Governor's Set-Aside
- ⇒ Juvenile Accountability Block Grant
- ⇒ Substance Abuse Centers, SAMHSA Block Grant

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⇒ Substance Abuse Centers State Prevention Funds

⇒ National Tobacco Control Program (CDC)

⇒ TANF funds aimed at prevention issues (child aggression predicts low productivity; parental depression or substance abuse predicts poor workforce involvement).

⇒ Tobacco Prevention (Settlement)

⇒ Maternal & Child Health Block Grant

To the extent that the funds could be pooled with new allocations proposed, plus leveraged against the Medicaid funds, Wyoming might have a far more powerful mechanism for funding the science-based but practical strategies recommended in this blueprint.

The authors of this report suggest that the Legislature and Governor undertake the actions necessary to consolidate the above prevention funds into the Vision 2020 Fund, with the following stipulations:

⇒ Prevention funds are allocated based on Wyoming-specific data and data analyses on factors most likely to produce a cost-effective change in the prevalence rate of the interconnected problems of substance abuse, delinquency, school failure, high-risk behaviorally related diseases or

disorders, mental illnesses, suicide, and antisocial behavior.

⇒ Competitive applications for prevention funds are governed by a uniform grant application.

⇒ Competitive applications are reviewed following published guidelines.

⇒ Governor's priorities may be set for competitive applications, which include preferences for concerns deemed in the best interest of the state or by prevalence of problems by geography or geo-mapped units.

⇒ A certain percentage is set aside each year for competitive awards initiated from the field that include a qualified experimental design for evaluating the impact of the innovation for Wyoming conditions or circumstances.

⇒ The rules and procedures for competitive and/or block grants shall be promulgated by the Wyoming Youth Development Sub-Cabinet.

### **Wyoming Recommendation:**

The Governor and Legislature should direct the consolidation of certain prevention funds into one coherent fund for the purposes of an integrated, leveraged prevention effort—designed to promote the use of cost-effective, scientifically validated principles and procedures.